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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,610	10/27/2003	Roger R. Smith	050377-0306115	6473

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EXAMINER	
TALBOT, MICHAEL	

ART UNIT	PAPER NUMBER
3722	

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/693,610	SMITH, ROGER R.	
	Examiner	Art Unit	
	Michael W. Talbot	3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-19 and 21-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-11,14-19,21-24,27 and 28* is/are rejected.

7)☒ Claim(s) *12,13,25 and 26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 August 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02/16/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 16 February 2006 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6,8,14-19,21,27 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Curtis '855. Curtis '855 shows in Figure 2 a force limiting workpiece holding device having a spindle (8), a hydraulic closer (62 and col. 1, lines 40-41) that applies a force, a workpiece holder (32) slidably mountable to the spindle including a plurality of circumferentially-spaced gripping segments (col. 3, lines 34-37) and a force limiting coupling structure (14,78,86) including a biasing structure (14,78,86) having a spring force (via 78,86) positioned between the workpiece holder and the closer such that the force applied by the closer is transferred to the workpiece holder through the biasing structure (via the coupling structure) wherein the force limiting coupling structure is constructed and arranged to limit a resultant force to the spring force of the biasing structure. Curtis '855 further shows the workpiece holder including outwardly facing cam surfaces (40) that slidably engage inwardly facing cam surfaces (42)

provided on a tapered cap (4) mounted to the spindle. Curtis '855 further shows the closer including a draw bar (62) that interconnects the closer and the coupling structure.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-6,8-11,14-19,21-24,27 and 28 are rejected under 35 U.S.C. 102(a) as being unpatentable over Elbe '182 in view of Curtis '855. Elbe '182 shows in Figures 1 and 2 a force limiting workpiece holding device having a spindle (b), a closer (b^1,b^2) that applies a force, a workpiece holder (collet) slidably mountable to the spindle including a plurality of circumferentially-spaced gripping segments (D) and a force limiting coupling structure (A,a^1,a^7) including a biasing structure (a^7) having a spring force positioned between the workpiece holder and the closer such that the force applied by the closer is transferred to the workpiece holder through the biasing structure (page 2, lines 32-49) wherein the force limiting coupling structure is constructed and arranged to limit a resultant force to the spring force of the biasing structure. Elbe '182 further shows the workpiece holder including outwardly facing cam surfaces (d1) that slidably engage inwardly facing cam surfaces (f) provided on a tapered cap (F) mounted to the spindle. Elbe '182 further shows the closer including a draw bar (b^1) that interconnects the closer and the coupling structure. Elbe '182 further shows the coupling structure having an elongated stem having one end (a^2) mounted to the workpiece holder and an opposite end coupled to a spacer (a^4) providing a first support surface, the coupler (A) providing a second support surface (a^8) slidably mounted to the elongated stem between the spacer and the workpiece holder, and the biasing structure positioned between the spacer and the workpiece

holder such that the ends rest on the first and second support surfaces whereby a force applied by the closer is transferred from the draw bar to the coupler, then from the coupler through the biasing structure and to the spacer, and finally from the spacer to the stem and workpiece holder (page 2, lines 12-56). Elbe '182 further shows the coupler having a stroke length with respect to the elongated stem that is sufficiently larger than a stroke length of the closer (Fig. 1). Elbe '182 further shows the coupling structure including a fastener (a^5) threadably engaged with the elongated stem to support the spacer and to adjust the position of the spacer thereby pretensioning the biasing structure. Elbe '182 lacks specific reference to the conventional collet actuating mechanism, i.e. closer, being of hydraulic type.

Curtis '855 describes in col. 1, lines 40-41 a hydraulically operated piston to actuate the draw bar. In view of this teaching of Curtis '855, it is considered to have been obvious to modify the workpiece holding device of Elbe '182 to include another well-known actuating means, such as hydraulically operated, as taught by Curtis '855 to provide a more control and repeatable actuation operation for increased efficiency and accuracy of the clamping force applied to the workpiece.

6. Claims 1-6,8,14-19,21,27 and 28 are rejected under 35 U.S.C. 102(a) as being unpatentable over Atkinson, III '095 in view of Curtis '855. Atkinson, III '095 shows in Figures 1-3 a force limiting workpiece holding device having a spindle (10), a closer (col. 2, lines 65-68) that applies a force, a workpiece holder (C) slidably mountable to the spindle including a plurality of circumferentially-spaced gripping segments and a force limiting coupling structure (34,38) including a biasing structure (40) having a spring force positioned between the workpiece holder and the closer such that the force applied by the closer is transferred to the workpiece holder through the biasing structure (via the coupling structure) wherein the force limiting coupling structure is constructed and arranged to limit a resultant force to the spring

force of the biasing structure. Atkinson, III '095 further shows the workpiece holder including outwardly facing cam surfaces that slidably engage inwardly facing cam surfaces (18) provided on a tapered cap (14) mounted to the spindle. Atkinson, III '095 further shows the closer including a draw bar (48) that interconnects the closer and the coupling structure. Atkinson, III '095 lacks a specific reference to the conventional collet actuating mechanism, i.e. closer, being of hydraulic type.

Curtis '855 describes in col. 1, lines 40-41 a hydraulically operated piston to actuate the draw bar. In view of this teaching of Curtis '855, it is considered to have been obvious to modify the workpiece holding device of Atkinson, III '095 to include another well-known actuating means, such as hydraulically operated, as taught by Curtis '855 to provide a more control and repeatable actuation operation for increased efficiency and accuracy of the clamping force applied to the workpiece.

Response to Arguments

7. Applicant's arguments filed 16 February 2006 have been fully considered but they are not persuasive.

8. Regarding Curtis '855, the biasing structure is being redefined to include the combination of the springs (78,86) and the contractor (14), and therefore the "resultant force" is "transferred through" and "limited by" the "biasing structure" as now defined by Examiner. Furthermore, there is no structure provided in claims 1,17 and 27 to prevent the Examiner from redefining the members used to make-up the "biasing structure".

9. Regarding Elbe '182, the biasing member (a^7) is one member of a chain of members used in combination to transfer a force from the closer member to move the gripping segments of the workpiece holder to an expanded or retracted position. Furthermore, the "resultant force" transferred through draw bar (b^1) moved against coupler (A), which moves against gripping

segments (D) forcing wall end (a^3) to move against head end (a^2) through stem (a^1) thus biasing the spring (a^7) and therefore the "resultant force" is "transferred through" and "limited by" the internal elastic/spring force of the "biasing structure".

10. Regarding Atkinson, III '095, the biasing member (40) is one member of a chain of members used in combination to transfer a force from the closer member to move the gripping segments of the workpiece holder to an expanded or retracted position. Furthermore, the force transferred through draw tube (34) threadedly connected to workpiece holder (C) is limited directly by the internal elastic/spring force of the "biasing structure" and thus the "resultant force" is "transferred through" and "limited by" the internal elastic/spring force of the "biasing structure

Allowable Subject Matter

11. Claims 12,13,25 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

12. Any inquiry concerning the content of this communication from the examiner should be directed to Michael W. Talbot, whose telephone number is 571-272-4481. The examiner's office hours are typically 8:30am until 5:00pm, Monday through Friday. The examiner's supervisor, Mrs. Monica S. Carter, may be reached at 571-272-4475.

In order to reduce pendency and avoid potential delays, group 3720 is encouraging FAXing of responses to Office Actions directly into the Group at FAX number 571-273-8300. This practice may be used for filling papers not requiring a fee. It may also be used for filing papers, which require a fee, by applicants who authorize charges to a USPTO deposit account. Please identify Examiner Michael W. Talbot of Art Unit 3722 at the top of your cover sheet.

MWT
Examiner
30 April 2006

MONICA CARTER
SUPERVISORY PATENT EXAMINER